Bioinformatics engineer / Data and tools stewardship

About the position

Applications are invited for a full time position in a role as Bioinformatics engineer/Data and tools steward at the new initiative of Life Science data management hub, hosted by the Centre for Bioinformatics (SBI), Faculty of Mathematics and Natural Sciences, University of Oslo (UiO).

The purpose of the new initiative of the Life Science data management hub is to establish, implement and facilitate good data management routines throughout the full scope of research projects in the life sciences at UiO in order to make the data re-usable and promote reproducibility of research findings. The Life Science data management hub will have many prominent research institutes/initiatives of Norway as the initial partners (e.g., ELIXIR, USIT, CEES, NORMENT, Oslo Center for Biostatistics and Epidemiology, BigInsight, CanCell, and Competence Group for Research Data). In addition, the Centre for Bioinformatics and its nodes will also be the partners.

The Centre for Bioinformatics was established in 2018 as a partnership between the Department of Informatics, Department of Biosciences, Department of Chemistry, and the School of Pharmacy. The Centre has a hub-node structure connecting central bioinformatics user environments at UiO and in the Oslo region. The hub is initially hosted by the Department of Informatics, but will move to the new UiO Life Science Building when this is finalized.

Duties/Responsibilities

The successful candidate will be responsible for two tasks of equal importance:

1. Data management support

   The candidate will facilitate data management within the UiO user community

   This will be a key position at the Centre for Bioinformatics, where the successful candidate will be advising all the nodes/partner institutes of the bioinformatics hub regarding data management practices with the main goal of making data re-usable and promoting reproducibility of research findings. The candidate will establish, implement, maintain and facilitate data management routines according to the FAIR standards (described below) to all the partners of Life Science data management hub. The candidate would act as one of the central contact persons for data stewardship activities both at the Centre for Bioinformatics and the Life Science data management hub when cooperating with the national and international data management initiatives in life sciences. In this regard, the candidate is expected to cooperate with the local node of ELIXIR (https://elixir-europe.org/) in Oslo and also internationally with the ELIXIR community. Further, reproducibility also involves software practices, and will be an important aspect of the work. Successful candidates would be well-positioned to take up exciting roles as Data Stewards in the future, which has been popularly suggested to become a required role in many of the organizations that are especially data-driven.

   Large volumes of data are common in several sub-disciplines of life sciences (e.g. sequencing data, imaging data etc). Data management is particularly important in life sciences throughout the life cycle of research projects to adhere to the FAIR standards (Findable, Accessible, Inter-operable, Re-Usable). Findable: In order to make data re-usable, both humans and machines should be able to find the data, and for that machine-readable metadata is necessary. Accessible: Once the data is found (either by humans or by machines), the next obstacle to overcome is the accessibility of the data - meaning that the required authentications and authorisations have to be met. Inter-operable: Often, it is required to integrate one type of dataset with another type of dataset or several other types of datasets. In addition, the data needs to inter-operate well with other application systems, machines, tools and so on. Re-usable: The main goal is to make data re-usable by optimising the data management practices.

2. Support for user immunology platform

   The candidate will contribute to setting up and developing a web-based platform that will allow immunologists with limited computational training to perform sophisticated analyses of immune responses.

   The platform will be running on a dedicated server, which has ample CPU and GPU resources, where a range of immune analysis software will be installed. The immunologists will interact with the system through a variety of web tools powered by the Galaxy platform. We will on this Galaxy instance install a mix of already available web tools, new wrappers for existing software, and newly developed web tools tailored to the needs of immunologists using the platform. To make the platform truly usable and useful for immunologists, it will also be crucial to streamline the analysis process from start to end, by ensuring good interoperability between the various tools and by ensuring that the entire ecosystem of tools and platform functionality is broad and flexible enough to meet the immunologists' needs from uploading of their data to final analyses.

   Depending on the candidate's profile of skills, competence and interests, the candidates contributions to this platform could either be more focused on the technical aspects of getting software and tools to work correctly, or more focused on user experience aspects of understanding/exploring ways of setting up tools, guidance and platform functionality to make the immunologist users succeed in using the system. It should here be noted that while the ambition is for the system to be useful also for immunologists with limited computational training, most of the research groups envisioned as users of the platform have members that are bioinformaticians, meaning that at least for part of the tools, a more demanding user interaction would be acceptable.

Qualification requirements

When evaluating applicants, weight will put on documented experience and qualifications in the following areas:

Requirements

- Applicants must possess a degree at minimum bachelor level in Computer Science, Bioinformatics, Information Science, Data Science, Computational Biology or a relevant field within Biology, Biomedical sciences or Health Sciences.
- Fluent English, both oral and written

Desired competence (nice to have, but not strictly required)

- Programming and technical competence
- Familiarity with typical datasets produced in biomedical research (e.g. omics)
- Knowledge/Experience in data management
- Data storage platforms including cloud solutions
- Norwegian language, both oral and written is an advantage

Personal skills

- Ability to work independently, to collaborate, and coordinate with colleagues

We offer

- salary NOK 523 200 - 627 700 per annum depending on qualifications in a position as Head Engineer (position code 1087), depending on qualifications and seniority.
- attractive welfare benefits and a generous pension agreement, in addition to Oslo’s family-friendly environment with its rich opportunities for culture and outdoor activities

How to apply

The application must include:

- Cover letter (statement of motivation)
- CV (summarizing education, positions, relevant experience, and other qualifying activities)
- Copies of educational certificates (academic transcripts and diplomas only)
- Names and contact details of 2-3 references (name, relation to candidate, email and telephone number).

The application with attachments must be delivered in our electronic recruiting system. Please note that all documents should be in English (or a Scandinavian language).

Formal regulations

Interviews with the best qualified candidates will be arranged.

According to the Norwegian Freedom of Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

Contact information

For more information about the position contact the Director of the Centre for Bioinformatics, Prof. Eivind Hovig at +47 93069881, ehovig@ifi.uio.no

For questions regarding our application system, please contact HR Senior Adviser Torunn Standal Guttormsen, phone:+47 22854272, email: t.s.guttormsen@mn.uio.no

About the University of Oslo

The University of Oslo is Norway’s oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

The Department of Informatics (IFI) is one of nine departments belonging to the Faculty of Mathematics and Natural Sciences. IFI is Norway’s largest university department for general education and research in Computer Science and related topics. The Department has more than 1800 students on bachelor level, 600 master students, and over 240 PhDs and postdocs. The overall staff of the Department is close to 370 employees, about 280 of these in full time positions. The full time tenured academic staff is 75, mostly Full/Associate Professors.

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